

The 2009 Weapon Systems Acquisition Reform Act and the Certification Process



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View from the Congress. . .

- ***Congress's Perception:***

- **Nunn McCurdy law in place since 1982, but:**

- Not that many consequences over time
- Cost growth continued
- Perception of "Rubber Baselines" & lack of discipline

- ***Reaction: Mandatory Discipline***

- **FY06 NDAA**

- Tightened Nunn McCurdy rules and measurements
- Section 2366, Title 10, required certification of MDAPS at MS B

- **FY07 NDAA**

- Added three more criteria for MS B certification

- **FY08 NDAA**

- Required certification at MS A (costs understood, non-duplicative, valid requirement)

- **FY09 NDAA**

- Updated section 2366 for technical corrections

And that's not all. . .



Even More Teeth . . .

Weapon Systems Acquisition Reform Act of 2009

- ***Amends MS A (section 2366a) Certification Process***
 - Invokes Nunn-McCurdy “like” process for pre-MS B pre-MDAPs
 - Retroactively applies certification criteria to post-MS A programs that began prior to enactment of the 2366a certification requirements, but have not yet received MS B approval.
- ***Amends MS B (section 2366b) Certification Process***
 - Retroactively applies certification criteria to post-MS B programs that began prior to enactment of the 2366b certification requirements, but have not yet received MS C approval.
- ***Creates SEC-DEF designated official for Program Assessment and Root Cause Analysis***
- ***Strengthens Nunn McCurdy Process***
 - *But that’s another topic all on its own. . .*



Weapon System Acquisition Reform Act 2009

*"The **purpose of this law** will be to **limit cost overruns before they spiral out of control**. It will strengthen oversight and accountability by appointing officials who will be charged with closely monitoring the weapons systems we're purchasing to ensure that costs are controlled. If the cost of certain defense projects continue to grow year after year, those projects will be closely reviewed, and if they don't provide the value we need, they will be terminated. This law will also enhance competition and end conflicts of interest in the weapons acquisitions process so that American taxpayers and the American military can get the best weapons at the lowest cost."*

***Signing Statement
May 22, 2009***

BARACK OBAMA



Mandate for Reform. . .

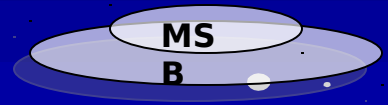
“Fully reforming defense acquisition also requires recognizing the challenges of today’s battlefield and constantly changing adversary. This requires an acquisition system that can perform with greater urgency and agility. We need greater funding flexibility and the ability to streamline our requirements and acquisition execution procedures.

The perennial procurement and contracting cycle – going back many decades – of adding layer upon layer of cost and complexity onto fewer and fewer platforms that take longer and longer to build must come to an end. There is broad agreement on the need for acquisition and contracting reform in the Department of Defense. There have been enough studies. Enough hand-wringing. Enough rhetoric. Now is the time for action.”

***Robert Gates, Secretary of Defense,
Defense Budget Recommendation Statement,
2009***

April 6,

*You are now entering
the Certification Zone...*





MS A Certification Requirements

The Milestone Decision Authority must Certify that:

1. The program has an approved Requirements Document (i.e., an Initial Capabilities Document)
2. The program is being executed by an entity with a relevant core competency
3. If the program duplicates a capability already provided, the duplication is necessary and appropriate
- 4. An analysis of alternatives has been performed consistent with study guidance developed by the Director, Cost Assessment and Program Evaluation***
5. A **Cost Estimate** has been submitted ***with the concurrence of the Director, Cost Assessment and Program Evaluation*** and is consistent with the priority of the program assigned by the JROC



MS A Certification - a Real Example

Ship-to-Shore Connector (SSC) MS A Criteria Review & Recommendation Process

1. Valid Requirement

- JROC-approved October 18, 2006 SSC Initial Capabilities Document defines gaps and describes desired capability to fill those gaps.

2. Executed by an entity with a relevant core competency

- Amphibious Warfare Program (PMS377) within Navy PEO Ships is the designated Navy acquisition materiel developer for SSC.
- PMS377 has previously demonstrated competency in developing landing craft programs.

3. Duplication Assessment

- SSC is a replacement for the retiring Landing Craft, Air Cushion program. In the post 2014 time frame, there are no programs of record to fill those capability gaps.

4. Analysis of Alternatives

- Navy 2007 AoA identified three viable alternative designs – one was selected to provide the material solution for the identified gaps.

5. Cost estimate consistent with priority

- Navy's baseline acquisition cost estimate (i.e., RDT&E and procurement) is \$4,274.4M (BY10) for 73 craft (first one is an R&D craft). SSC fully funded for the Tech Development phase, FY09-11.
- SSC ICD validated via JROCM 220-06 (October 16, 2006) with Joint Potential Designator of "JROC Interest". The Joint Staff sustained the Navy's request in the Program Review, reinforcing the priority of the system to the Joint force.



2366b Certification Requirements

The first part of the legislation requires the USD(AT&L) to conduct a Business Case Analysis and certify the following four items:

1. Appropriate tradeoffs have been made to ensure that the program is affordable (i.e., cost effective) in light of possible alternatives.
2. The program is affordable (on both a unit cost and whole program basis) as part of the DoD budget.
3. A reasonable cost and schedule estimate has been developed with the concurrence of the Director of Cost Assessment and Program Evaluation.
4. Funding is available in the FYDP to execute the development and production of the program and that the funding level is consistent with the cost estimate.



2366b Certification Process

The Business Case Analysis is a compilation of:

- An Analysis of Alternatives done by the lead service with a Sufficiency Review by the Director of Cost Assessment & Program Evaluation
- The Requirements Document (i.e., the Capabilities Development Document) Approved by the JROC
- The Approved Program Acquisition Strategy
- A Program Office Cost Estimate and an Independent Cost Estimate (ICE)
 - ICE done by the OSD Director of Cost Assessment and Program Evaluation for ***MDAPs for which the USD(AT&L) is the Milestone Decision Authority***
 - ICE done by the Component Cost Center for ACAT IC Programs
- An Extract from the President's Budget Showing Full Funding and Program Affordability



2366b Certification Process

The second part requires the USD(AT&L) to certify that—

1. The program demonstrates a high likelihood of accomplishing its intended mission ***based upon a Preliminary Design Review (PDR) and a post-PDR assessment***

The third part of the legislation requires the USD(AT&L) to certify an additional five items:

1. Appropriate market research has been conducted
2. DoD has completed an Analysis of Alternatives
3. The JROC has approved the requirements document
4. The technology in the program has been demonstrated in a relevant environment ***based upon an independent assessment by the DDR&E***
5. The program complies with all DoD policies, regulations and directives



Acquisition Reform Initiatives

DEPARTMENT POSITION

- ***The Department remains committed to improving its requirements and acquisition management practices to deliver the needed capability at acceptable performance levels and rates—and to be better stewards of the taxpayer's dollar.***

WAY AHEAD. . .

- ***Three pronged approach:***
 - Acquisition Workforce Reform
 - Tactical Acquisition Reform
 - Strategic Acquisition Reform



WSARA Implementation Status

- **WSARA Statutory Direction Effective on date signed (May 22, 2009)**
 - Implementation on programs real-time as they come up for review
 - Retroactive certification process underway
- **Draft “Directive-Type” Memo for Implementation of Acquisition Policy & Process Changes**
 - Draft has been prepared and released for informal key stakeholder and DAPWG review
 - Formal review and approval process to follow
- **Organizational/Personnel Changes in work**
 - New D,T&E & D,SE positions aligned with D,DR&E
 - Performance Assessment & Root Cause Analysis function currently “under construction”
 - D, CPAE initial implementation approved—support structure in work (DEPSECDEF performing duties of D, CAPE until political appointee nominated and confirmed.)



Acquisition Work Force Reform

Building Back the Acquisition Workforce:

• *Ongoing Initiatives:*

- Increasing number of acquisition personnel by 20,000 positions over 2010-2015 FYDP
 - 9,000 new civilian hires – contracting, cost estimating, pricing, and contract oversight positions
 - 11, 000 conversions from contractor to federal civilian positions – primarily program management, systems engineering, logistics management, and business management personnel
- Improve Training and Human Capital Planning
- Reinvigorate and Raise Certification Standards, example new requirements for Business, Cost Estimating & Financial Management (BCEFM) workforce



Tactical Acquisition Reform

Building Strong Program Foundations for More Predictable Outcomes:

- ***The Department's recently revised acquisition policy (DoD Instruction 5000.02) emphasizes building strong program foundations.***
 - ***Starting Programs Right***
 - Identifying Critical Warfighter Needs & Maintaining Requirements Stability
 - Emphasizing Cost Realism & Improving Cost Estimating
 - ***Executing Programs Properly***
 - Integrating Test and Evaluation
 - Disciplining Systems Engineering
 - Integrating Life Cycle Management Principles
 - Improving Dialogue with Industry & Tying Profit to Performance
 - ***Improving Program Management & Oversight***
 - Conducting More Frequent Program Reviews to Assess Progress
 - Using Information to Manage Programs Effectively
 - Empowering Program Managers
 - Improving Acquisition of Services Management
 - ***Delivering Timely Solutions***



Strategic Acquisition Reform

Aligning Strategy, Budget, and Governance:

- ***ACTIONS NEEDED:***

- Align Investment Priorities to Strategic Priorities
- Balance Existing and Future Investments to Provide the Right Mix Capabilities at the Right Time
- Assign Responsibility for Fulfillment of Capability Gaps
- Establish a Fixed/Stable Investment Budget
- Create Integrated and Effective Governance

Cost Growth!!!





Staggering Overruns?

The Washington Post

March 31, 2009: Development costs for the Pentagon's major weapons systems soared last year, helping drive overruns that are "staggering," the Government Accountability Office said in a report released yesterday. Overall, the cost overruns associated with the military's major weapons ... "total near \$300 billion, and the average program delay has stretched from 21 to 22 months,"

The figures reflect a weapons development and procurement system that is woefully broken... "Pentagon planners don't do a good enough job of analyzing those requirements to understand whether they have the technologies and designs to build to them," GAO analyst Michael J. Sullivan said.



Or... Sensationalism?

The new GAO report continues to sensationalize the assessed cost growth of \$296 billion on 96 programs. This number has been cited by many people as a condemnation of the defense procurement process. I have analyzed the components of this GAO number, and I would suggest that the number is misleading, out-of-date, and largely irrelevant to the current management of DoD programs.

--Mr. John J. Young, former USD(AT&L)

The Math Matters....



GAO Methodology

- ***GAO defines cost growth as the change in total program acquisition costs from the original estimate to the current estimate***
- ***GAO publishes an annual report focused on cost growth***
 - Summarizes 96 acquisition programs
 - Stated a \$296B cost growth for the FY08 portfolio, down from \$301B in FY07
- ***The fine print....***
 - 1) Procurement of additional quantities and/or required capability counts as “bad”;
 - 2) Differing “portfolios” compared on an annual basis;
 - 3) Pre-Milestone B estimates used (i.e, before the program defined);
 - 4) Poor early performers can never recover, even if they have been performing well for many years;
 - 5) Acquisition painted with broad brush as though all programs are broken.



Our Interpretation

- ***Procurement of additional quantities and/or required capability is not cost “growth”***
 - Quantity and capability enhancements due to mission requirements should not be chargeable to cost growth.
 - AT&L estimates capability enhancements alone account for \$96B of total
- ***Portfolio cost growth cannot be compared on an annual basis***
 - Analysis is grounded in dissimilar comparison of programs.
 - 59 programs moved into or out of the portfolio between 2003 and 2008.
- ***Pre-Milestone B estimates should not be used***
 - Pre-Milestone B estimates are incomplete and are not a reliable estimate
 - AT&L methodology uses the more reliable Milestone B estimate
 - This alone yields total cost growth of \$278B as opposed to \$296B.



Our Interpretation

- ***Past sins never forgiven (...some remorse is useful though)***
 - Original estimates are done many years ahead of actual production and can be greatly outdated. Examples are JSF, FCS, V-22, and C-17.
 - Twelve of the current programs are 15 years or older; 41 of the programs had a MS B before 2001 (Oldest: Trident II Missile July 1987)
 - Example: JSF and FCS programs are planned to be in the portfolio until 2034 and 2030, respectively. By GAO methodology, they will keep a \$78B cost growth mark even if they have no cost growth for the next 25 years!
 - Portfolio cost growth over last 5 years is \$176B
- ***Sinners and saints***
 - The top eight highest cost growth programs account for about 80% of the total cost growth.
 - DDG 51, FCS, and JSF alone account for more than 45% of total
 - 29 Programs have zero or negative cost growth



More Meaningful Metrics Needed

- ***AT&L proposed new set of metrics to more fairly represent weapon system cost growth***
 - Performance Analysis: Total cost growth over a period of time
 - Trend Analysis: Average yearly cost growth over a period of time
- ***GAO, OMB and OSD(AT&L) worked together to develop new metrics to measure acquisition cost growth***
 - Continue to measure cost growth from Original Estimate
 - Fair, transparent, and fact based (unbiased) metrics meant to provide total visibility
- ***GAO and AT&L agreed to conduct a pilot study using new metrics***

Top 10 Cost Growth Programs

Top 10 Programs	First Original Estimate Date	Cost Growth - GAO Method	Cost Growth - 2002 - 2007
DDG 51 Destroyer	Feb-88	48	-1
Future Combat System (FCS)	May-03	39	39
F-35 / Joint Strike Fighter	Oct-01	38	56
V-22 Joint Services Advanced Vertical Lift Aircraft	Feb-88	24	3
C-17 Globemaster III	Dec-88	23	0
Virginia Class Submarine (SSN 774)	Jun-95	23	-1
C-130J Hercules	Oct-96	11	-4
Family of Medium Tactical Vehicles	Oct-88	10	1
CH-47F Improved Cargo Helicopter (ICH)	May-98	9	5
Stryker Family of Vehicles	Nov-00	8	8
Total		238	108

What's Happened Lately?

Total Portfolio Growth Last 5 Years

Program	Estimate SAR 2002 or Later	Estimate SAR 2007	Cost Growth 2002-2007	Program	Estimate SAR 2002 or Later	Estimate SAR 2007	Cost Growth 2002-2007
1 JSF	188.3	244.8	56.5	48 Light Utility Helicopter	1.7	1.9	0.2
2 FCS	89.8	129.7	40.0	49 AIM-9X	3.1	3.3	0.2
3 CVN 21	3.5	29.9	26.5	50 SSGN	4.4	4.5	0.1
4 DDG 1000	11.4	27.6	16.2	51 Cobra Judy Replacement	1.6	1.7	0.1
5 Stryker	8.0	16.1	8.1	52 AGM-88E AARGM	1.5	1.6	0.1
6 BLACK HAWK Upgrade	13.2	20.8	7.6	53 VH-71	6.5	6.6	0.1
7 BFVS A3 Upgrade	3.3	10.1	6.8	54 RMS	1.4	1.5	0.1
8 Chem D					0.6	0.6	0.1
9 CH-47F					1.4	1.4	0.0
10 NPOESS					16.0	16.0	0.0
11 LONGBO					0.8	0.9	0.0
12 AMRAAM					3.5	3.5	0.0
13 Global H					0.4	0.4	0.0
14 V-22 OS					3.9	3.9	0.0
15 EFV					3.6	3.6	0.0
16 Chem D					1.6	1.6	0.0
17 SBIRS H					0.7	0.7	0.0
18 AEHF					1.3	1.2	-0.1
19 ARH					6.5	6.4	-0.1
20 FMTV					10.2	10.1	-0.1
21 H-1 Upgr					8.7	8.6	-0.1
22 J ASSM					2.9	2.8	-0.1
23 MH-60R					16.7	16.6	-0.1
24 MH-60S					1.7	1.6	-0.2
25 E-2D AH					5.5	5.3	-0.2
26 J SOW U					7.0	6.8	-0.2
27 TACTICA					5.1	4.9	-0.2
28 J TRS NE					1.8	1.5	-0.3
29 ATIRCM					30.0	29.6	-0.4
30 Javelin	4.9	5.8	0.9	77 MP-RTIP	1.7	1.3	-0.4
31 Navstar GPS User Equipment	1.3	2.1	0.9	78 VTUAV	2.5	2.0	-0.5
32 C-17A	72.7	73.6	0.9	79 J DAM	6.4	5.8	-0.7
33 C-130 AMP	4.7	5.4	0.8	80 PATRIOT/MEADS CAP Fire Unit	18.7	17.9	-0.8
34 FBCB2	2.8	3.5	0.7	81 ADS Increment Alpha	1.5	0.6	-0.9
35 T-AKE	4.8	5.5	0.7	82 PATRIOT PAC-3 Missile Segment	10.7	9.8	-0.9
36 TRIDENT II MISSILE	48.9	49.6	0.7	83 VIRGINIA CLASS SUB	82.8	81.6	-1.3
37 AB3	7.0	7.6	0.6	84 DDG 51	77.5	75.9	-1.7
38 MIDS	2.0	2.6	0.6	85 J SOW Baseline/BLU-108	4.0	2.2	-1.8
39 C-5 AMP	0.9	1.5	0.5	86 HIMARS	4.2	2.1	-2.1
40 T-45TS	8.1	8.6	0.5	87 Excalibur	4.6	2.3	-2.3
41 Navstar GPS Space & Control	6.7	7.1	0.5	88 LPD 17	16.8	14.4	-2.4
42 CVN 68	6.4	6.8	0.4	89 MRAP	26.7	22.5	-4.2
43 WGS	1.7	2.1	0.4	90 C-130J	17.1	12.3	-4.8
44 Minuteman III PRP	2.6	2.9	0.3	91 F/A-18E/F	57.0	51.8	-5.2
45 J LENS	6.4	6.7	0.3	92 GMLRS	11.2	5.4	-5.8
46 J PATS	5.5	5.7	0.2	93 J TRS HMS	9.7	3.0	-6.7
47 LHA Replacement	3.1	3.3	0.2	94 F-22 Raptor	82.2	73.7	-8.5
				Total	1,316.0	1,491.9	176.0

Portfolio Growth (\$B)

Estimate
SAR
2002 or
Later

Estimate
SAR
2007

Cost
Growth
2002-
2007

Total

1,316

1,491

176



What Keeps Nancy Awake at Night...

- ***The Acquisition Rules are becoming so constraining that our real work to bureaucratic work ratio is out of whack***
 - Example, the E-2D saga—ended up with a decision package with M tabs (13), including 3 USD(AT&L) signature documents, and the usual 8 letters to the Hill
- ***Some “catch-up” certification aspects of the WSARA of 2009, will keep us employed for years***
 - There are over 100 programs that require “catch up” certifications, about 40 before May 31, 2009, and about 60 before June 30, 2009.
- ***Data/Time Lag/Beyond MDAPs***
 - We don't have good, timely data on Major Defense Acquisition Programs (MDAPs)
 - MDAPs take a long time from start to finish. How will we show success—that acquisition reform is working—in 2 years?
 - How do we get out ahead of GAO?
 - What metrics should we propose?
 - Should the Department put out a cost growth report?
 - We now spend more on contracts for services than for MDAPs. That is an area needing different rules and more oversight.
 - The same is true of IT programs, especially business IT programs.

QUESTIONS?